

THE INVENTION CLAIMED IS

Sub c2 1. A system for detection and treatment of unwanted agents within air inside of an enclosed airspace that is a gathering area for people,

comprising:

a detection system for detecting said unwanted agents within said

air,

a treatment system, and

a control, responsive to said detection system, for activating said treatment system in response to detection of said unwanted agents within said air.

2. The system for the detection and treatment of unwanted agents of claim 1 wherein said detection system utilizes immunoassays, such as antibody based or synthetic-peptide based immunoassays.

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3. The system for the detection and treatment of unwanted agents of claim 1 wherein said detection system utilizes nucleic-acid-based assays, such as the polymerase chain reaction immunoassays.

4. The system for the detection and treatment of unwanted agents of claim 1 wherein said detection system utilizes mass-spectrometric-based assays.

5. The system for the detection and treatment of unwanted agents of claim 1 wherein said detection system utilizes a plurality of assays, such as antibody based or synthetic-peptide based immunoassays, nucleic-acid-based assays, such as the polymerase chain reaction immunoassays, and mass-spectrometric-based assays.

6. The system for the detection and treatment of unwanted agents of claim 1 including a control connected to said treatment system and said circulation system for inactivating said circulation system if said treatment system shuts down prematurely.

7. A method for the detection and treatment of unwanted agents within the air inside of an enclosed airspace that is a gathering area for people, the air circulated in an air stream, comprising:

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8. The method for the detection and treatment of chemical and biological agents of claim 7, including the step of stopping said circulation system if said treatment system shuts down.

an autonomous chemical and pathogen detector within the said forced-air circulation system.

10. An apparatus that detects and identifies the presence of airborne chemical and/or biological threats to the human occupants of an enclosed airspace that is served by a forced-air circulation system comprising:  
an autonomous chemical and pathogen detector within the said forced-air circulation system.

15. The apparatus of claim 11 wherein said autonomous chemical and pathogen detector utilizes a plurality of assays, such as antibody based or synthetic-peptide based immunoassays, nucleic-acid-based assays, such as

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the polymerase chain reaction immunoassays, and mass-spectrometric-based assays.

16. The apparatus of claim 11 including a system that treats the airborne threat using electrostatic precipitation.

17. The apparatus of claim 11 including a system that treats the airborne threat using an aqueous-based spray/aerosol scrubbing system.

18. The apparatus of claim 11 including a system that treats the airborne threat using both electrostatic precipitation and an aqueous-based spray/aerosol scrubbing system.

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